

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

SATIUS HOLDING, INC.,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 18-850-CJB
)	
)	
SAMSUNG ELECTRONICS CO., LTD.,)	
and SAMSUNG ELECTRONICS)	
AMERICA, INC.,)	
)	
Defendants.)	

MEMORANDUM ORDER

In this patent action filed by Plaintiff Satius Holding, Inc. (“Plaintiff”) against Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (together, “Defendants”), Plaintiff alleges infringement of United States Patent No. 6,711,385 (the “385 patent” or the “asserted patent”). Presently before the Court is the matter of claim construction. (D.I. 128; D.I. 129) The Court¹ herein addresses the parties’ arguments regarding disputed term 1 (“transmitting electric or electromagnetic signals over air”).

I. BACKGROUND

Plaintiff filed its Complaint on June 5, 2018. (D.I. 1) The case proceeded from there, but in the midst of the claim construction process, on December 11, 2019, the Court granted Defendants’ motion to stay the case pending the completion of reexamination proceedings that had been instituted as to the '385 patent in the United States Patent & Trademark Office (“PTO”). (D.I. 86)

¹ On May 3, 2024, the parties consented to the Court’s jurisdiction to conduct all proceedings in this action, including entry of final judgment. (D.I. 179)

The case remained stayed until February 6, 2023, when the Court granted Plaintiff's motion to lift the stay. (D.I. 98) The Court did so in light of the fact that the PTO had confirmed the validity of two of the three asserted claims in this case: dependent claims 11 and 18 of the '385 patent (the third asserted claim is independent claim 1 of the patent, which currently stands rejected by the PTO). (*Id.*)

The '385 patent, titled "Coupler for Wireless Communications," issued on March 23, 2004 from U.S. Appl. No. 09/610,728, which was filed on July 6, 2000. ('385 patent at 1) The '385 patent relates to "a coupler for wireless communications, and . . . to the use of a novel air-core or dielectric core coupler as a matching device to the characteristic impedance of the air for a transmitter and receiver for wireless communications." (*Id.*, col. 1:6-10)

On July 21, 2023, the parties filed their Joint Claim Construction Brief. (D.I. 124) The Court held a *Markman* hearing on August 24, 2023. (D.I. 183 (hereinafter, "Tr.")) During the *Markman* hearing, the Court ordered the parties to file supplemental briefing on an issue that was relevant to the resolution of disputes regarding term 1: i.e., "on the issue of where you have a claim that has two alternatives and one of those alternatives is a scientific impossibility but the other is not, what do the courts say about whether that outcome necessarily leads to indefiniteness or not." (D.I. 139 at 1 (internal quotation marks omitted); Tr. at 93-94) The parties simultaneously filed those supplemental briefs on September 7, 2023. (D.I. 140; D.I. 141)

II. STANDARD OF REVIEW

The Court has often set out the relevant legal standards for claim construction, including in *Vytacera Bio, LLC v. CytomX Therapeutics, Inc.*, Civil Action No. 20-333-LPS-CJB, 2021 WL 4621866, at *2-3 (D. Del. Oct. 7, 2021). The Court hereby incorporates by reference its

discussion in *Vytacera Bio* of these legal standards and will follow them herein. To the extent consideration of the disputed terms here necessitates discussion of other, related legal principles, the Court will address those principles in Section III below.

III. DISCUSSION

In total in their initial claim construction briefing, the parties set out 10 disputed terms for the Court’s review. For the reasons set out below, the Court will only need to take up the parties’ arguments as to term 1.

Term 1—“transmitting electric or electromagnetic signals over air”—appears in the preamble of claim 1;² claim 1 recites as follows:

1. A communications apparatus for *transmitting electric or electromagnetic signals over air*, the air having a characteristic impedance, the communications apparatus comprising:

a transmitter having an output impedance, said transmitter for transmitting the electric or electromagnetic signals at a preselected frequency; and

a coupler connected to the transmitter, said coupler comprising a transformer having a non-magnetic core, said transformer communicating the electric or electromagnetic signals to the air, said coupler matching the output impedance of the transmitter to the characteristic impedance of the air.

(’385 patent, col. 6:31-42 (emphasis added))

The parties’ competing proposed constructions for “transmitting electric or electromagnetic signals over air” are set out in the chart below:

Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“transmitting electric or electromagnetic signals over air”	Definite.	Indefinite.

² Claims 11 and 18 in turn are dependent on claim 1, and so the Court’s evaluation of term 1 here will impact all three asserted claims.

	No construction necessary – plain and ordinary meaning.	
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(D.I. 124 at 9; D.I. 115 at 4-5) As can be seen there, the key issue regarding this term relates to its definiteness.

The parties have two disputes that go to that question. First, the parties disagree as to whether the preamble of claim 1 is limiting. Second, if the preamble is limiting, the parties dispute whether term 1 is indefinite. The Court will address each dispute in turn.

A. Is the preamble limiting?

The first dispute is about whether the preamble is limiting. Defendants take the position that it is, (D.I. 124 at 12, 18-19; Tr. at 16), while Plaintiff disagrees, (D.I. 124 at 9-10, 15-16; Tr. at 39). For the reasons that follow, the Court sides with Defendants.

As a general rule, the preamble of a claim is not treated as a claim limitation. *See Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1347 (Fed. Cir. 2012) (“This court has recognized that as a general rule preamble language is not treated as limiting.”). This is particularly so “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.” *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (internal quotation marks and citation omitted).

That said, there are a number of circumstances in which a preamble may be adjudged to be limiting. One is where the patentee “clear[ly] reli[es] on the preamble during prosecution to distinguish the claimed invention from the prior art[;]” in that scenario, the patentee “transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention.” *Id.*; *see also Data Engine Techs. LLC v. Google LLC*, 10 F. 4th 1375, 1381 (Fed. Cir. 2021) (same); *Bio-Rad Lab’ys, Inc. v. 10X Genomics Inc.*, 967 F.3d

1353, 1369 (Fed. Cir. 2020) (same); (Tr. at 24 (Defendants' counsel noting this precedent); *id.* at 47 (Plaintiff's counsel acknowledging same)).

Defendants argue that this is exactly what happened here. That is, Defendants note that during the reexamination proceedings for the '385 patent, the patentee repeatedly relied on the existence of term 1 in order to distinguish the claimed invention from the prior art.³ (D.I. 124 at 12, 18-19; Tr. at 20-24) In this regard, in their claim construction answering brief, Defendants pointed the following statements that Plaintiff made to the PTO:

- “*Abraham PCT does not anticipate claim 1 of the '385 Patent because it does not disclose (1) '[a] communications apparatus for transmitting electric or electromagnetic signals over air,' (2) 'transformer communicating the electric or electromagnetic signals to the air,' or (3) 'said [coupler/transformer] matching the output impedance of the transmitter to the characteristic impedance of the air.'*” (D.I. 115, ex. S-2 at 13 (emphasis added); *id.*, ex. S-7 at 9 (same); *id.*, ex. S-9 at 16-17 (same)); and
- “[*I*]t is facially non-obvious that the coupler described in Claim 13 of Abraham '987 would find any utility in any 'communications apparatus for transmitting electric or electromagnetic signals over air,'” as recited in claim 1 of the '385 patent. (*Id.*, ex. S-7 at 6 (emphasis added); *see also id.*, ex. S-2 at 10 (same); *id.*, ex. S-9 at 11 (same))

Plaintiff did not substantively address this argument in its reply brief. (D.I. 124 at 15-17 (Plaintiff failing to do so); *id.* at 19 (Defendants, in their sur-reply brief, noting that after they

³ In a footnote in their briefing, Defendants argue that “[t]he preamble is also limiting as it provides the antecedents for multiple limitations, including, e.g., ‘the electric or electromagnetic signals’ in the ‘transmitter’ and ‘coupler’ limitations.” (D.I. 124 at 14 n.7 (emphasis omitted)) However, this argument was not addressed any further by either party in the briefing or at the *Markman* hearing. Arguments made solely in a footnote and not squarely argued are deemed waived or forfeited at this stage. *See, e.g., Jackson v. NuVasive, Inc.*, Civil Action No. 21-53-RGA, 2023 WL 6387866, at *2 n.1 (D. Del. Sept. 29, 2023); *Topia Tech., Inc. v. Egnyte, Inc.*, Civil Action No. 21-1821-CJB, 2023 WL 4364160, at *3 n.5 (D. Del. July 6, 2023). For that reason, the Court will not address this assertion further herein.

had “set out repeated instances of [Plaintiff] distinguishing prior art based upon Term 1” Plaintiff had “decline[d] to address a single one of those statements” in its briefing); Tr. at 41-42) Instead, in that brief, Plaintiff essentially ignored Defendants’ argument. (D.I. 124 at 15-17; Tr. at 41-42) Then during the *Markman* hearing, for the first time Plaintiff’s counsel asserted that in the prosecution history, whenever the above-referenced language of “transmitting electric or electromagnetic signals *over air*” was used as a way of distinguishing prior art, the patentee “used [those statements] in conjunction with the limitation that’s in . . . claim [1] of [‘]communicating the electric or electromagnetic signals *to the air*[’]. . . because they essentially mean the same thing.” (Tr. at 41 (emphasis added)) In other words, Plaintiff seemed now to be arguing that: (1) even though the patentee did appear to distinguish prior art due to the fact that the art did not include what is described in term 1; (2) for some reason, this did not mean that the preamble was limiting, because in at least some of the relevant portions of the prosecution history, the patentee also distinguished the prior art based on its lack of a similarly-worded limitation found in the body of the claim (i.e., “transformer communicating the electric or electromagnetic signals *to the air*”).⁴

⁴ The parties have a dispute over whether the words “over air” (as used in the preamble of term 1) and “to the air” (as used in the body of claim 1) mean the same thing. Plaintiff contends that they do. (D.I. 124 at 17 (Plaintiff stating that “[w]ireless signals being transmitted or communicated ‘over air’ versus ‘to the air’ when read using common sense are one in the same”); *see also* Tr. at 41, 44) Defendants, on the other hand, assert that these phrases do not mean the same thing. Defendants point out that the phrases use different words, and suggest that “‘communicating the electric or electromagnetic signals *to the air*,’ [] is fundamentally different from ‘transmitting electric or electromagnetic signals *over air*.’” (D.I. 124 at 15 (emphasis in original)) This is purportedly so because “communicating electric signals *to the air*” conveys that “electric signals can be communicated *through the communications apparatus*[.]” rather than *through the air* (as Defendants argue is implied by the use of “over air”). (*Id.* at 18 (emphasis added))

At the *Markman* hearing, Defendants further explained their view of the difference between these terms. Defendants noted that an electric signal in a medium, such as an electric

As an initial matter, the Court concludes that Plaintiff clearly waived or forfeited this argument by not making it in the briefing. *See Fundamental Innovation Sys. Int'l LLC v. Lenovo (U.S.), Inc.*, Civil Action No. 20-551-RGA-CJB, 2022 WL 1046255, at *3 n.9 (D. Del. Apr. 7, 2022) (finding that a new argument presented at oral argument was waived, where it could have been presented in the briefing but was not) (citing cases); *Horatio Washington Depot Techs. LLC v. Tolmar, Inc.*, Civil Action No. 17-1086-LPS, 2018 WL 5669168, at *7 n.4 (D. Del. Nov. 1, 2018) (same, citing cases), *report and recommendation adopted* 2019 WL 1276028 (D. Del. Mar. 20, 2019). Oral argument is not the time for a party to spring new positions regarding important issues on its opponent and on the Court. Countenancing a contrary position would render motion briefing meaningless. And it would turn motion hearings into free-for-alls.

Additionally, even had Plaintiff not waived or forfeited this argument, it would not win the day. Regardless of whether “over air” and “to the air” have different meanings (and the Court need not decide that here), the statements Defendants point to clearly indicate that the patentee distinguished prior art on the basis that that art did not disclose “a communications apparatus for transmitting electric or electromagnetic signals over air.” There would be no reason for the patentee to make that distinction if it was not suggesting that this term was a part of the claimed invention. And the fact that the patentee *also* argued that the prior art at issue

line, “can go so far as the electric line goes and eventually you have to get it in the air somehow. What the electric signal will produce is a corresponding electromagnetic signal in the air.” (Tr. at 30) So, “to bring an electric signal *to the air* is to [bring it to] the edge of the conductive material. And then [the signal] is electromagnetic [while being transmitted *over air*] until it gets over to another conductive material.” (*Id.* at 30-31 (emphasis added)) Essentially, in Defendants’ view, “to the air” “means [that the electric signal] goes up to the edge of the conductive material and then it’s [transmitted over] air after the conductive material.” (*Id.* at 31) So Defendants’ position (as further set out below) is that while an electric signal can be transmitted “to the air,” it cannot be transmitted “over air” because the latter is a technical and scientific impossibility.

could be distinguished on other grounds does not detract from the fact that the patentee clearly distinguished it on *this* ground. *Cf. Data Engine Techs. LLC*, 10 F.4th at 1383 (“[W]e have held patentees to distinguishing statements made during prosecution even if they said more than they needed to overcome a prior art rejection.”); *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1374 (Fed. Cir. 2007) (“[A]n applicant’s argument that a prior art reference is distinguishable on a particular ground can serve as a disclaimer of claim scope even if the applicant distinguishes the reference on other grounds as well.”).

There was one argument that Plaintiff *did* make in the initial claim construction briefing as to why the preamble was non-limiting, and so the Court will also address that argument here. It is no more successful. This was Plaintiff’s assertion that the in their *ex parte* reexamination request, Defendants had “conceded that the preamble merely refers to the invention’s ‘use or purpose’”—and so Defendants cannot now argue that the preamble is limiting. (D.I. 124 at 15 (citing D.I. 125, ex. U-2 at 109-10); *see also id.* at 9) In reality, the full quote from Defendants’ reexamination request is hard to parse in this regard, and it does not clearly indicate that Defendants were there “conced[ing]” that the preamble is non-limiting. (D.I. 125, ex. U-2 at 109-10 (“The portion of the preamble reciting ‘for transmitting electric or electromagnetic signals over air, the air having a characteristic impedance’ recites a use or purpose for the communications apparatus, and thus, *even if it were a limitation*, ‘cannot prevent [Abraham 980] from anticipating the claim.’”)) (emphasis added, internal citations omitted)) And regardless, this statement of Defendants simply cannot negate the fact that *the patentee* clearly used the claim language at issue to distinguish prior art. It is that act of the patentee, pursuant to clear precedent from the United States Court of Appeals for the Federal Circuit, that renders the preamble limiting.

So, for the reasons stated above, the Court concludes that the preamble (and particularly for our purposes here, term 1) is limiting.

B. Is term 1 indefinite?

Having concluded that the preamble is limiting, the Court now turns to the parties' various disputes relating to whether the term is indefinite.

Defendants take the position that because claim 1 is to a communications apparatus for “transmitting electric *or* electromagnetic signals over air[.]”⁵ (’385 patent, col. 6:31-32 (emphasis added)), this means that the claim allows for two alternatives or permutations: one option wherein the apparatus is capable of “transmitting *electric* . . . signals over air” and another option where in the apparatus is capable of “transmitting *electromagnetic* signals over air[.]” *See also* (D.I. 124 at 12, 18; D.I. 140 at 2); *Wasica Fin. GmbH v. Cont’l Auto Sys., Inc.*, 853 F.3d 1272, 1280 (Fed. Cir. 2017) (“Using the disjunctive ‘or’ as in ‘numbers or symbols’ designates numbers and symbols as distinct alternatives to one another.”) (citing cases); *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1199 (Fed. Cir. 2013) (“The disjunctive ‘or’ plainly designates that a series describes alternatives.”). From there, Defendants assert that one of those two options—“transmitting electric . . . signals over air”—amounts to a scientific impossibility, since it is “a matter of basic science that only electromagnetic signals can propagate in air, electric signals cannot.” (D.I. 124 at 12 (citing D.I. 126, ex. V-1 at ¶¶ 30-31)) Instead, Defendants argue that electric signals must be transmitted “by voltage or through a conductive medium, like a wire.” (Tr. at 17) And Defendants sum up by asserting that because term 1 requires an

⁵ The parties agree that transmitting such signals “over air” means transmitting them through the air, i.e., wirelessly. *See supra* n. 4; (Tr. at 52-54, 58).

alternative that is actually a scientific impossibility, then the term must be indefinite. (D.I. 124 at 12-13, 18; Tr. at 17-20)⁶

In light of Defendants’ argument, the first question for the Court is: “*Is transmitting electric signals over air a scientific impossibility?*” On this point, there is no real dispute. Defendants’ expert, Dr. Jonathan Wells, explains that “[a]n electromagnetic wave or signal cannot propagate through any transmission medium (e.g., air or vacuum) without an electric field component and a magnetic field component.” (D.I. 126, ex. V-1 (“Wells Decl.”) at ¶ 31) And, “[a] wireless signal cannot exist as only an electric field or only as a magnetic field; a wireless signal can only exist as a combined electric and magnetic (i.e., electromagnetic) field.” (*Id.*) This means that “[a]ny signal that propagates wirelessly must be an electromagnetic wave[.]” (*Id.*) So, “the only signals that can travel in air are electromagnetic signals[, and i]f an electric signal is not an electromagnetic signal, it cannot be transmitted over air.” (*Id.* at ¶¶ 75-76) Plaintiff does not ever directly contest Dr. Wells’ testimony on these points. (*See* D.I. 124 at 11; *see also* Wells Decl. at ¶ 78 (Dr. Wells noting that “Satiuss’ expert does not offer any testimony of whether a POSITA would know or understand how to actually transmit an electric signal over the air.”))

With that issue resolved, the next question for the Court is: “So does claim 1 (and term 1) actually claim an apparatus that is able to, alternatively, transmit *electric or electromagnetic*

⁶ In Defendants’ view, term 1 ended up reading this way due to sloppiness on the part of the patentee. Defendants believe that the patentee copied over certain “communicating electric signals” language from a prior patent where the electric signals at issue were communicated through electric lines (which is scientifically possible)—but in doing so, now included this language in a patent claim (i.e., claim 1) where the transmission of the electric signals must be over air (which is not scientifically possible). (D.I. 140 at 2; Tr. at 27-28; Defendants’ *Markman* Hearing Slides at Slide 16) The Court need not make any definitive findings on why we ended up where we have as to term 1’s text. The important thing is that the text reads how it reads.

signals over air?” In the initial claim construction briefing, it was hard to discern Plaintiff’s position on this question. At times in its portion of that briefing, Plaintiff seemed to suggest that the answer to this question was “Yes”—such as where it wrote that “a POSITA would understand that the invention involves a communications apparatus for transmitting—or transferring—electric or electromagnetic signals through air as a medium.” (D.I. 124 at 17; *see also id.* at 11 (citing D.I. 125, ex. U-1 (“Kain Decl.”) at ¶ 35)) However, in at least one portion of that briefing, Plaintiff appeared to argue that term 1 does *not* claim an apparatus that can transmit electric signals over air, such as when it wrote: “Defendants’ argument that ‘or’ designates ‘alternatives’ is also unpersuasive and irrelevant, because [Plaintiff] did not define signal transmission via an ‘electric’ signal as an alternative to an ‘electromagnetic signal’ in the specification, and neither term is prefaced by ‘i.e.’” (*Id.* at 17 (citation omitted)) So it was hard to tell *what* Plaintiff was arguing here, just by reading its initial claim construction briefing.

It took until the *Markman* hearing for Plaintiff to provide a clear answer as to its view. During that hearing, Plaintiff’s counsel argued that a POSITA would understand term 1’s reference to “transmitting electric . . . signals over air” as *not actually requiring* the transmission of electric signals over air. Instead, counsel asserted that the phrase was simply meant to be a form of “shorthand”—one referring to the fact that an electric signal will be transformed into an electromagnetic signal, and then that electromagnetic signal is what will go out over the air and to its destination. (Tr. at 59-60; *see also id.* at 50-51 (Plaintiff’s counsel stating that the “electric signal is transmitted over the air” as term 1 provides, but only *in the sense that* “[d]ata is going to get transformed into an electric signal [and that] electric signal is going to get transformed into . . . an electromagnetic wave . . . [that will] carry the electric signal . . . to its destination and then at the destination, that electromagnetic wave is going to be turned back into an electric signal”); *id.*

at 52-53 (Plaintiff’s counsel stating that “[s]o if we’re going to get into . . . we’re talking about electromagnetic signals, then yes, those are going to be the waves that are propagated through the air.”); *id.* at 84)⁷ Put a different way, Plaintiff was arguing that term 1 should not be read literally—and that claim 1’s facial statement that the apparatus can transmit electric signals over air should essentially be read out of the claim. (*Id.* at 29) And in its supplemental briefing submitted after the *Markman* hearing, Plaintiff again took the position that “[c]laim 1 does not recite incorrect science” because “[a] POSITA would understand that an electromagnetic signal has both time-varying electric and magnetic fields to create an electromagnetic wave to propagate over air” and thus would “recognize the need of *converting the electric signals to electromagnetic signals* for transmitting over air[.]” (D.I. 141 at 1 (emphasis added); *see also id.* at 2 (“It is within the knowledge of the POSITA that the electric signal is converted into an electromagnetic signal for transmitting from the transformer to the air.”))

So although Plaintiff did not propose a construction for term 1, its position as to what term 1 means is essentially that “transmitting electric or electromagnetic signals over air” requires only “transmitting electromagnetic signals over air.” But that position is not supportable in light of the record.

One reason why that is so is that although Plaintiff repeatedly says that a POSITA would understand term 1’s reference to “transmitting electric . . . signals over air” to not literally require the actual transmission of electric signals over air (and instead that a POSITA would understand

⁷ At another point during the *Markman* hearing, Plaintiff’s counsel seemed to relatedly suggest that what is scientifically impossible is “transmitting electricity over the air”—but that term 1 does not allow for that. (Tr. at 50) Instead, counsel said that it allows for an “electric signal” to be transmitted over air—and that, in turn, is a reference to an electric signal getting transformed into an electromagnetic signal that is then sent out over the air. (*Id.* at 50-51)

this as a shorthand way of saying that the electric signals will be converted to electromagnetic signals when they are sent wirelessly), Plaintiff points to no actual intrinsic or extrinsic evidence in support of that assertion. Plaintiff did provide a declaration from its expert, Dr. Aron Kain, as part of the record on claim construction. (D.I. 125, ex. U-1) But neither Dr. Kain's declaration nor any other part of Plaintiff's presentation included a statement that a POSITA would understand "transmitting electric . . . signals over air" to mean the same thing as "transmitting electromagnetic signals over air." (Tr. at 59-60) Instead, Dr. Kain stated only that term 1 "has a well understood plain and ordinary meaning when read as a whole to a POSITA according to the intrinsic evidence" and cited to portions of the specification that purportedly disclosed "an antenna connecting to the coupler that can transmit the electric or electromagnetic signals over the air." (Kain Decl. at ¶¶ 33, 36 (citing '385 patent, cols. 3:10-12, 5:48-52, 6:2-3)) That does not sound like a statement that term 1 *does not* discuss transmitting electric signals over air; it sounds like a statement that term 1 *does* discuss just that.⁸ Dr. Kain also points to the definition of the term "transmission" in *The Authoritative Dictionary of IEEE Standards Terms*: "[t]he electric[] transfer of a signal, message or other form of intelligence from one location to another[.]" (Kain Decl. at ¶ 37 (citing D.I. 125, ex. U-4 at 1207)) Dr. Kain states that this definition "supports my conclusion that a POSITA would understand that the claimed

⁸ The Court discusses Dr. Kain's opinions here, though it is far from clear that those opinions are relevant or useful as to this question. It is a Court's job, not an expert's job, to construe claim terms by utilizing the tools of claim construction that do not require special knowledge in the art. *Cf. Horizon Pharma, Inc. v. Dr. Reddy's Lab's Inc.*, 839 F. App'x 500, 504 (Fed. Cir. 2021) (finding an expert's testimony unpersuasive where the "expert merely concluded that '[a] person of ordinary skill in the art would have understood that the claim term 'target' means 'produce' and cited the same language from the specification that [the court found] unpersuasive"); *Synchronoss Techs., Inc. v. Dropbox, Inc.*, 389 F. Supp. 3d 703, 715 (N.D. Cal. 2019) ("To say that a person of ordinary skill would understand that 'red' means 'blue,' is the same thing as rewriting 'red' as 'blue.'").

communication apparatus propagates electric or electromagnetic signals from one location to another over air (wireless means) in carrier frequencies.” (*Id.*) But again, nothing about this statement by Dr. Kain, nor the dictionary definition he cites, supports the idea that when term 1 says that the apparatus permits transmission of electric signals over air, it does not mean what it says.

The other (even bigger) reason why Plaintiff’s position must fail here is that courts simply cannot “redraft claims”; claim terms are understood to mean what they say, even if that meaning does not seem very practical (or even if it sometimes appears nonsensical). *Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004); *see also Oasis Tooling, Inc. v. Siemens Indus. Software, Inc.*, Civil Action No. 22-151-CJB, Civil Action No. 22-312-CJB, 2023 WL 8005818, at *4 (D. Del. Nov. 17, 2023); *MiiCs & Partners Am., Inc. v. Toshiba Corp.*, Civil Action No. 14-803-RGA, Civil Action No. 14-804-RGA, 2016 WL 4573103, at *16 (D. Del. Aug. 31, 2016). In *Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371 (Fed. Cir. 2004), the Federal Circuit explained that where a claim uses “ordinary, simple English words whose meaning is clear and unquestionable” and “is susceptible to only one reasonable construction. . . we must construe the claims based on the patentee’s version of the claim as he himself drafted it[.]” such that “we construe the claim as written, not as the patentees wish they had written it.” 358 F.3d at 1374; *see also Koki Holdings Co. v. Kyocera Senco Indus. Tools, Inc.*, Civil Action No. 18-313-CFC, 2021 WL 1092579, at *2 (D. Del. Mar. 22, 2021) (“[I]t is improper to rewrite claim language to save a patent from impossibility.”). This is the case with term 1. It clearly and explicitly states that the claimed apparatus alternatively allows for the transmission of “electric or electromagnetic signals over air”—and nothing that Plaintiff has pointed to in the patent suggests that the term does not mean what it says. Even if one of those two options is not

scientifically viable, the Court cannot re-draft the claim in a way that differs from the plain language that the patentee used.

Therefore, the Court goes forward with the understanding that: (1) it is a scientific impossibility to transmit an electric signal over air; but (2) term 1 facially requires that one permutation of the claimed apparatus be able to do this.

This brings the Court to its final question: “Does this all mean that term 1 is indefinite?” Defendants say that by reciting a scientific impossibility, the term must be indefinite. Plaintiff responds by arguing that even if Defendants are correct that it is impossible to transmit electric signals over air, since term 1 provides an alternative that *is* possible (i.e., transmitting electromagnetic signals over air), then the term is not indefinite, because a POSITA would still be able to practice the invention.⁹

Section 112 of the Patent Act requires that a patent claim “particularly point[] out and distinctly claim[] the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112(b). If it does not, the claim is indefinite and therefore invalid. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 902 (2014). The primary purpose of the definiteness requirement is to ensure that patent claims are written in such a way that they give

⁹ Defendants’ main contention as to this term, as has been noted herein, is that the term is indefinite. In their initial claim construction briefing however, Defendants also asserted in a footnote that by claiming something scientifically impossible, “[c]laim 1 fundamentally runs afoul of the utility and enablement requirements of 35 U.S.C. §§ 101[&] 112 by presenting an impossible, non-enabled invention.” (D.I. 124 at 13 n.6) As noted earlier, arguments made only in footnotes are waived or forfeited at this stage. And the claim construction stage is not typically the right time to be addressing ineligibility or lack of enablement issues anyway. *See UCB, Inc. v. KV Pharm. Co.*, Civil Action No. 08-223-JJF, 2009 WL 2524519, at *10 (D. Del. Aug. 18, 2009). So the Court will not be discussing those subjects further herein. (That said, the Court struggles to see how the full scope of claim 1 could be enabled if it states that the apparatus is able to do something that is a scientific impossibility.). *See Amgen Inc. v. Sanofi*, 598 U.S. 594, 610 (2023); *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008) (“The full scope of the claimed invention must be enabled.”).

notice to the public of what is claimed, thus enabling interested members of the public (e.g., competitors of the patent owner) to determine whether they infringe. *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 779-80 (Fed. Cir. 2002). Even so, “absolute precision is unattainable” and is not required. *Nautilus*, 572 U.S. at 910. In the end, “a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Id.* at 901. Definiteness is to be evaluated from the perspective of a POSITA at the time the patent was filed. *Id.* at 908.¹⁰

In arguing in favor of their position on indefiniteness, Defendants point to numerous cases where the Federal Circuit and district courts have held that when a claim term “is nonsensical or requires an impossibility[,]” it “is indefinite as a matter of law[.]” *Koki Holdings Co.*, 2021 WL 1092579, at *1 (*cited in* D.I. 140 at 1); *see also Horizon Pharma*, 839 F. App’x at 505 (*cited in* D.I. 140 at 1); *Trs. of Columbia Univ. in N.Y. v. Symantec Corp.*, 811 F.3d 1359, 1367 (Fed. Cir. 2016) (*cited in* D.I. 140 at 1). One such exemplary opinion is that in *Synchronoss Techs., Inc. v. Dropbox, Inc.*, 987 F.3d 1358 (Fed. Cir. 2021). (D.I. 140 at 1) In *Synchronoss*, the district court concluded that the asserted claims were indefinite because they called for an impossibility—in that they required “‘generating a [single] digital media file’ that itself ‘compris[es] a directory of digital medial files’”—and yet the record evidence undisputedly showed that a digital media file cannot contain a directory of digital media files. 987 F.3d at

¹⁰ Like claim construction, definiteness is a question of law for the court. *H-W Tech., L.C. v. Overstock.com, Inc.*, 758 F.3d 1329, 1332 (Fed. Cir. 2014). The Federal Circuit has stated that “[a]ny fact critical to a holding on indefiniteness . . . must be proven by the challenger by clear and convincing evidence.” *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003); *see also Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008).

1366. The plaintiff nevertheless argued that the claims were not indefinite because a POSITA “would read the specification and reasonably understand that the inventions ‘mean that, in response to input from a user, a digital media file is generated as a second, updated version of the media data in the same format as the first version of the media data.’” *Id.* (citation omitted). In other words, the plaintiff’s argument regarding definiteness required “rewriting the claims[.]” *Id.* at 1367. In holding that the claims were indefinite, the Federal Circuit explained that “the asserted claims . . . are nonsensical and require an impossibility—that the digital media file contain a directory of digital media files[.]”—and that while “[a]dopting [the plaintiff’s] proposal would require rewriting the claims, . . . it is not our function to rewrite claims to preserve their validity.” *Id.* at 1366-67 (internal quotation marks and citation omitted); *see also Horizon Pharma*, 839 Fed. App’x at 505 (“Reading the claim literally, a dose form, which is an inanimate object, cannot set a goal. That the proper construction of the claims is nonsensical does not warrant judicial redrafting of the claims.”).

What the plaintiff tried unsuccessfully to do in *Synchronoss* is what Plaintiff is attempting to do here. Here, again, Plaintiff is asserting that a POSITA would understand term 1’s reference to the apparatus being capable of “transmitting electric . . . signals over air” to not actually require transmitting electric signals over air—and instead to only require transmitting *electromagnetic* signals over air. (Tr. at 50-51, 59-60)¹¹ Or, put differently, Plaintiff wishes the

¹¹ In its initial claim construction briefing, Plaintiff made another argument about why the term was not indefinite: i.e., that Defendants’ position about indefiniteness is “inconsistent with their position in their petitions for *ex parte* reexaminations”; Plaintiff argued that “[n]either Defendants nor their expert had any issue construing the boundaries of this term when trying to map their invalidity claims for the PTO in their two separate *ex parte* reexaminations.” (D.I. 124 at 11) However, as Defendants correctly point out, “indefiniteness may not be raised by a requester to an *ex parte* reexamination . . . and the Federal Circuit has held (for *inter partes* review) that the [PTO] is not precluded from considering anticipation and obviousness even where there is an indefiniteness issue the Patent Office is not authorized to

Court to rewrite the claim language so that instead of reading “[a] communications apparatus for transmitting electric or electromagnetic signals over air” the claim were to read “[a] communications apparatus for transmitting electromagnetic signals over air[.]” But that is not what the patentee wrote. In line with the guidance in *Synchronoss* and the other cases cited by Defendants, it is not the Court’s role to re-write term 1 to save the asserted claims’ validity. *See Synchronoss*, 987 F.3d at 1366-67; *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 781 (Fed. Cir. 2010) (explaining that it is an accepted principle of claim construction that a term should not be construed to “render physical structures and characteristics specifically described in [the] claims superfluous” and claims “are construed with an eye toward giving effect to all of their terms, . . . even if it renders the claims inoperable or invalid”) (internal citations omitted); (Tr. at 74-75).

Now, the Court acknowledges that, unlike the cases cited by Defendants above, term 1 includes an additional wrinkle: it distinctly provides for two *alternatives*, one of which is scientifically impossible, and one of which is not. So does this fact impact whether the term is indefinite? Plaintiff suggests that by providing alternatives, the term would not render the claims indefinite, because a POSITA would simply ignore the part of the claim that is scientifically impossible, and only focus on the part that is not. (Tr. at 66 (Plaintiff’s counsel arguing that “so because you can practice the invention in” a way that is scientifically possible, “then the claim is definite”)) Defendants counter by stating that in a circumstance like this, where the asserted

adjudicate[.]” (*Id.* at 14 (internal citations omitted)); *see also* *NAPCO, Inc. v. Landmark Tech. A, LLC*, 1:21-CV-00025, 2023 WL 5000756, at *17 (M.D.N.C. Aug. 4, 2023). The Court does not find it inappropriate for Defendants to argue indefiniteness here, as they were not in a position to make such an argument in their petitions for *ex parte* reexamination.

claims “require two permutations[,]” the fact that one of the possible permutations is a scientific impossibility is enough to render the claim indefinite. (D.I. 140 at 2-3)

The parties provided caselaw to the Court on this issue in their supplemental briefs. And while none of the cases are exactly on all fours with our scenario here, one opinion submitted by Defendants was particularly persuasive. (*Id.*)

This was the Federal Circuit’s opinion in *Cochlear Bone Anchored Sols. AB v. Oticon Med. AB*, 958 F.3d 1348 (Fed. Cir. 2020), an opinion that addresses issues relating to alternatives found in a claim limitation. In *Cochlear Bone*, the defendant had filed a petition for *inter partes* review of all claims of the asserted patent. The PTO’s Patent Trial and Appeal Board (“PTAB”) concluded that certain claims were unpatentable, but did not reach that conclusion as to other claims, notably claim 10. *Cochlear Bone*, 958 F.3d at 1353. Claim 10, which recited a “directivity means comprising at least one directivity dependent microphone and/or signal processing means in the electronic circuitry” used a disjunctive—one that created “three alternative subsets of claim coverage—a directivity dependent microphone only; signal processing means only; and a directivity dependent microphone together with signal processing means.” *Id.* at 1359 (emphasis in original, citation omitted). Two of these three alternatives claimed a “signal processing means[,]” which in turn invoked means-plus-function claiming. The problem for the patentee was that the specification did not recite a corresponding structure for performing the claimed signal processing function. *Id.* at 1360 (internal quotation marks omitted). In light of this, the Federal Circuit explained that the PTAB “correctly held that the specification does not recite a corresponding structure for performing the signal processing function.” *Id.* However, the remaining claimed alternative—the one involving the “directivity dependent microphone” alone—was “independent of the others and [had] a discernible meaning

and [could] be compared to prior art” because the specification recited “a clear structure for performing the claimed directivity means.” *Id.* at 1359-60. The Federal Circuit remanded the case so that the PTAB could consider whether the directivity-dependent-microphone alternative was outside the scope of 35 U.S.C. § 112, ¶ 6, whether any asserted prior-art challenges rendered that alternative unpatentable, and whether, if so, claim 10 as a whole was unpatentable on that ground. *Id.* at 1359-60. But importantly for our purposes, in coming to this decision, the Federal Circuit also addressed the issue of claim 10’s definiteness. There, the Court concluded that “we may assume that claim 10 is indefinite” because, by reciting two of three alternative limitations that could not be performed, “it includes what is tantamount to an inkblot as an alternative way of coming within its boundaries.”¹² *Id.*; *cf. Fresenius USA, Inc. v. Baxter Int’l, Inc.*, 582 F.3d 1288, 1298 (Fed. Cir. 2009) (noting that as to the question of invalidity via anticipation, where a claim written in Markush form covers several possible compositions, it is deemed anticipated if any one of them is in the prior art).

Here, as in *Cochlear Bone* we have a claim term with multiple alternatives, and one of those alternatives is impossible to perform. Thus it stands to reason that, as the Federal Circuit advised in *Cochlear Bone*, here term 1 is indefinite as a result.¹³ In the end, as to claim 1 as a

¹² The PTAB could not have found claim 10 indefinite, because it was not permitted to assess the issue of definiteness. *Cochlear Bone*, 958 F.3d at 1359.

¹³ In contrast, the case that Plaintiff cited most prominently in support of its position (both during the *Markman* hearing and in its supplemental briefing) was *Aspex Eyewear, Inc. v. Miracle Optics, Inc.*, No. CV 01-10396 LGBBWRX, 2003 WL 24854204 (C.D. Cal. Oct. 29, 2003). (D.I. 141 at 1; Tr. at 65) That case focused on enablement (or, operability), not definiteness. In *Aspex*, the construction of an element (“element 8”) of the asserted claim (claim 12) resulted in four possible embodiments. 2003 WL 24854204, at *4. When another element of claim 12 (“element 7”) and element 8 were read together, one of the resulting embodiments was undisputably inoperable; the others were not. *Id.* The United States District Court for the Central District of California ultimately agreed with the plaintiffs that the claim was not invalid for lack of enablement, reasoning that “if some of the claimed combinations are inoperative, the

whole, the patentee simply did not “particularly point[] out and distinctly claim[] the subject matter which the inventor or a joint inventor regard[ed] as the invention.” 35 U.S.C. § 112(b).

This conclusion—that the claim term here is indefinite because one of its permutations is a scientific impossibility—also gibes with the extrinsic record. Dr. Wells explained that the meaning of term 1 would not be evident to a POSITA because “[t]ransmitting . . . over air” signals that are not electromagnetic signals does not have any meaning to a POSITA” and thus “a POSITA would not understand with reasonable certainty what is being claimed by [term 1].” (Wells Decl. at ¶ 77).

For all of these reasons then, the Court concludes that Defendants have demonstrated by clear and convincing evidence that term 1 is indefinite.¹⁴ Therefore asserted claim 1 is indefinite, as are dependant asserted claims 11 and 18.

claims are not necessarily invalid” for lack of enablement. *Id.* at *6 (emphasis in original) (citing *Atlas Powder Co. v. E.I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1576 (Fed Cir. 1984)). And the Court went on to conclude that because the record indicated that a POSITA would be able to practice the claimed invention without undue experimentation, claim 12 was not invalid for lack of enablement. *Id.* at *8.

The Court cannot rely on *Aspex* here. In part, that is due to the fact that the Court cannot see how the central premise of the *Aspex* decision—that a claim may be valid even if its full scope is not enabled—can still be good law in light of the Supreme Court of the United States’ decision in *Amgen, Inc. v. Sanofi*, 598 U.S. 594 (2023), which held that “the patent’s specification must enable the full scope of the invention as defined by its claims.” 598 U.S. at 610; *see also* (D.I. 140 at 3 (citing cases); Tr. at 72-73). And in part that is due to the guidance provided by the Federal Circuit in *Cochlear Bone* as to how to assess definiteness issues like the one at issue here.

¹⁴ This is an instance where, in the Court’s view, it is appropriate to resolve the definiteness dispute at the claim construction stage. Despite having multiple opportunities to bring further clarity to the record, Plaintiff did not do so during the briefing process (including the supplemental briefing process), nor during the *Markman* hearing. In contrast, Defendants set out their position clearly and supported it with expert testimony. *See Integra Lifesciences Corp. v. HyperBranch Med. Tech., Inc.*, Civil Action No. 15-819-LPS-CJB, 2017 WL 3731244, at *6 n.5 (D. Del. Aug. 30, 2017).

IV. CONCLUSION

For the foregoing reasons, the Court concludes that term 1 (“transmitting electric or electromagnetic signals over air”) is indefinite. The remaining terms are recited in claims depending from claim 1 and thus do not need to be construed.

By no later than **December 19, 2024**, the parties shall provide the Court with a joint status report as to what more, if anything, the Court needs to address regarding this litigation in light of its decision herein.

Dated: December 12, 2024


Christopher J. Burke
UNITED STATES MAGISTRATE JUDGE